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ABSTRACT

Based on a study of 30 exemplary programs in six states, this guide offers help to educators trying to serve students with mild learning handicaps (the learning disabled, mildly mentally retarded, and the mildly emotionally disturbed) in mainstream vocational classrooms. The document consists of seven chapters and an appendix. The first chapter introduces the structure of good vocational education. Each of five succeeding chapters tells what a set of actors (vocational education teachers, vocational education administrators, special education teachers, professional support staff, and principals and district administrators) in the educational system can do to serve such students in regular vocational classes. Chapter 7 mentions recommendations regarding changes in federal funding and data collection and state department of education funding, technical assistance, and evaluation. The appendix lists the programs visited during the project that produced this guide. (CML)

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INCREASING VOCATIONAL OPTIONS FOR STUDENTS WITH LEARNING HANDICAPS: A PRACTICAL GUIDE

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PREFACE

This guide grew out of our conviction that most students with mild learning handicaps (i.e., the learning disabled, educable mentally retarded, or mildly emotionally disturbed) can succeed in mainstream vocational education. We are equally convinced that most educators would like to make that possible but are often in doubt about what they should do. While no guide this general can provide all the answers to questions about improving vocational education for the handicapped, in these pages we suggest appropriate directions for efforts by interested educators.

After an introduction to the structure of good vocational education systems, each chapter addresses a different set of actors in the local education system. The explanation for each action is brief, intended to provide direction rather than detailed instructions.

Our suggestions are based on a study of thirty exemplary programs in six states. The study's findings are discussed in more detail in the report "Improving the Options of Handicapped Students in Mainstream Vocational Education," available from the Office of Special Education and Rehabilitative Services in the U.S. Department of Education. We also urge interested readers to consult the growing literature in vocational special needs education for ways to implement these ideas.

We hope our suggestions will help educators find ways to improve vocational options for students with handicaps.

ACKNOWLEDGEMENTS

As always with such research, the number of people who contributed to this project far exceeds the space available to thank them. We owe a substantial debt to the many teachers and administrators who took time from their demanding schedules to talk with our staff and show us how their programs work. In a sense, this guide is really their product, for their experiences serve as the basis for its recommendations. The schools we visited are listed in the appendix for those who might be interested.

In order to illustrate some of our recommendations, we have cited specific examples from certain schools or states. In most cases similar practices are also important aspects of other programs we visited; particular examples were chosen because they were especially applicable to a variety of other schools or situations. We found that vocational programs that succeed with special needs students have a great deal in common, so many of the practices suggested here are in place at the majority of the sites we visited.

Much credit also goes to Allen Phelps and Sheila Feichtner for their help. Finally, a special thanks is due to Kathy Dodge for designing this book and bringing it to production.

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INTRODUCTION 1

Because of a learning disability and behavioral problems, David was placed in a self-contained special education class in the third grade. His behavior improved in this setting, but because his attention span was short and his behavior disruptive unless he was closely supervised, David remained in special education classes through the sixth grade.

Without the special programs available in his school, David's problems would have kept him from pursuing vocational training. Fortunately, his school district began preparing him for the world of work even during the junior high years and continued special efforts toward this goal through his graduation.

In junior high school, David's Individual Education Plan (IEP) called for him to spend most of the day in a special education class, but he attended mainstream art and physical education classes. He tried hard, but in the eighth grade, David performed only at the sixth grade level in math and the fourth grade level in reading. In addition, his short attention span still caused problems.

Career exploration activities were included in the curriculum for the eighth grade special class. David and the other students spent time at an assessment center, visited some work sites, and saw films about different careers. David discovered that he enjoyed working with his hands, especially with wood. The Teacher at the assessment center said she would attend his next IEP meeting, which she called a "Futures Planning Meeting." Then she gave him some literature to take to his parents about high school and vocational education.

David's IEP meeting at the end of eighth grade was attended by David, his parents, the special education teacher for ninth grade, and the high school vocational special needs coordinator. The program developed for David for ninth grade included an introductory course in trades and industry, designed for special needs students.

David thrived in the trades and industry class. Although the instructor had little training in special education, he was an accomplished craftsman and a patient teacher. They were supported in their efforts by the special needs coordinator, who checked on David's progress regularly and suggested ways to get him over some rough spots, and by David's special education academic teacher, who developed special vocabulary lists and made sure that David mastered fractions. At the end of ninth grade, David reaffirmed his interest in working with wood. The consensus of his IEP committee was that he could manage a mainstream class in construction

technology in the tenth grade if he were given extra help with reading and provided with materials closer to his reading level.

David tried hard, but the mainstream class was not easy for him. Because of his reading problems, David found the textbook and other written materials difficult to understand. His attention span was good when he was working on an assignment he could handle, but he was very impatient if he had to wait for help. Because there were eighteen students in the class (compared to nine in his industrial arts class), he was forced to work with far less help from the teacher than he was used to. Nevertheless, with a resource teacher to assist him with the written materials, and two advanced students to help him in the shop, David managed to complete the course successfully. The special needs coordinator monitored David's progress throughout the year to make sure that he did not need to be transferred to the modified construction technology program.

In eleventh grade, David spent his mornings in a construction carpentry class at the area vocational center ten miles away. The teacher insisted on a very work-like atmosphere and demanded high quality carpentry. David rose to meet the challenge, and enjoyed the fact that many of the other students did not even realize that he was a "special ed" student. Assignments that required reading still caused him trouble, so he spent some of his afternoons getting help at the Learning Resource Center at his home high school. To help further, the carpentry teacher provided David with some simplified instructional materials he had developed the previous summer. The special needs coordinator closely monitored David's progress throughout the year. At the IEP committee meeting at the end of the year, the construction carpentry teacher expressed confidence that David could manage the work experience program the following year.

During his last year in high school, David worked at a construction site part time while taking his full academic curriculum. He received the minimum wage for his work. The construction supervisor was frustrated with David's slowness at times, but the owner of the construction company (a member of the advisory committeee for the area vocational center) was committed to providing jobs for special education students. David met weekly with the carpentry teacher and the teacher visited the job site regularly.

Towards the end of his senior year, David's IEP committee met to discuss his transition from school to work. The committee this year included a job placement specialist for the school district, who helped David find a job at a construction site. The job placement counselor visited David during his first day on the job, again after a week, and monthly for a year. On one occasion, after an argument with his supervisor, David dropped in to seek advice from the counselor. A year later, David was still working with the same construction company—truly a success story.

How can we increase the number of success stories like David's? Successful vocational programs for students with mild handicaps depend upon good teachers and an appropriate curriculum. In addition, these programs are systems of coordinated services from other professionals who serve students outside the vocational classroom.

Most mildly handicapped students in vocational education programs should participate in four types of instruction before making the transition to postsecondary education or employment: (1) the special education curriculum, including career exploration; (2) an introductory vocational class in a non-mainstream setting; (3) the main vocational sequence in either a modified or a mainstream setting, possibly some of each; and (4) paid work experience in an occupation related to the vocational education sequence.

Connecting and supporting these instructional activities are services provided outside the classroom that insure proper student placement and shape instructional approaches. These commonly include ongoing vocational assessment and planning, individualized assistance from learning specialists, counseling for transition, work placement assistance, and follow-up after graduation. Some of these services are available from personnel at each school and others are available at centralized locations within a school district or region. In addition to providing these services, specialists must also monitor student progress and coordinate the efforts of the different service providers.

What kind of educational experiences do handicapped students have when all of the appropriate classes and services are provided? The example on page 5 gives a chronological view of an exemplary vocational program for students with mild handicaps, progressing from career exploration to job placement. This optimal system of classes and services can result when each part of the educational system fulfills its potential.

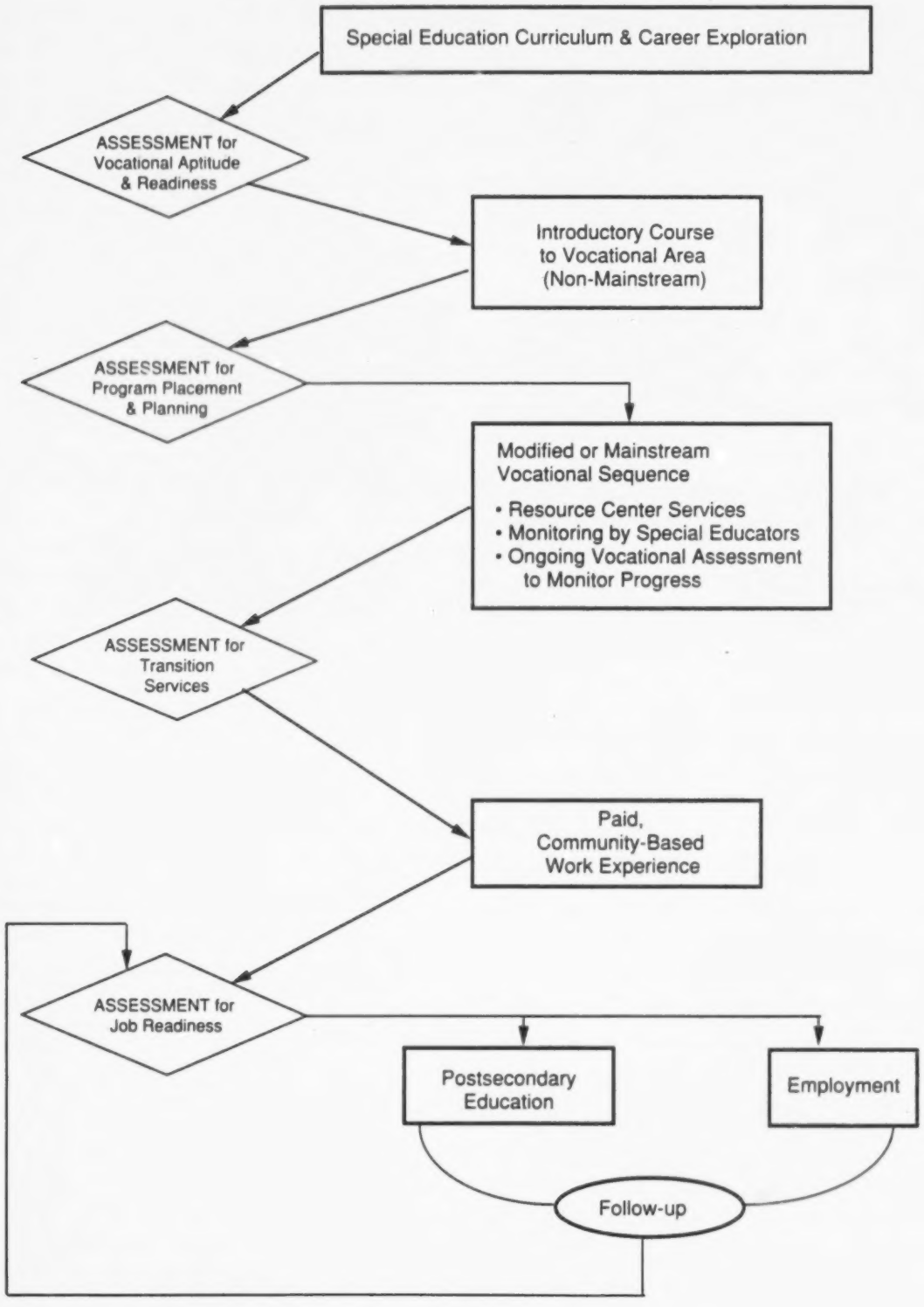
This view of vocational education may seem a remote goal, but with our current state of knowledge it is within reach. Each of the classes and services described above are already in place in some schools. This book is designed to make the goal more attainable by specifying reasonable steps for major actors in the educational delivery system.

Each chapter is aimed at a particular set of education officials: vocational education teachers, directors of vocational education, special education teachers, professional support staff, and local administrators. Separating the information into chapters is somewhat difficult because school districts may be organized according to one of several administrative structures. For example, principals of vocational centers may be considered both vocational education administrators and school administrators, making them the audience for both Chapters 3 and 6. Certainly many vocational education administrators are also serving as vocational education teachers. Similarly, some special education personnel serve both as support staff and as classroom teachers. It may be necessary to

read several chapters in order to get all of the information relevant to a particular school assignment.

If all of the personnel in a school district cooperate to implement these ideas, the result will be a much improved educational experience for special education students. However, most of the suggestions in this book can be implemented by one individual. If even one set of actors—vocational teachers, for example—can implement our suggestions for a particular area of responsibility, that will greatly improve the quality of mainstream vocational education for students with mild handicaps. Their actions may motivate other groups to collaborate in the effort and improve their programs as well. It takes time, resources, and effort to implement all the changes we have recommended, but the actions of even one person can make a big difference for a few students.

RECOMMENDED VOCATIONAL PROGRAM FOR STUDENTS WITH MILD HANDICAPS


Special Education Curriculum & Career Exploration
ASSESSMENT for Vocational Aptitude & Readiness
Introductory Course to Vocational Area (Non-Mainstream)
ASSESSMENT for Program Placement & Planning
Modified or Mainstream Vocational Sequence
• Resource Center Services
• Monitoring by Special Educators
• Ongoing Vocational Assessment to Monitor Progress
ASSESSMENT for Transition Services
Paid, Community-Based Work Experience
ASSESSMENT for Job Readiness
Postsecondary Education
Employment
Follow-up

WHAT VOCATIONAL TEACHERS CAN DO 2

As the classroom teacher, you are the most important person in the vocational education system. Ultimately, you determine whether students with learning handicaps will be able to succeed in your class. By observing and interviewing vocational teachers who are especially successful with special education students, we have found several ways in which you can improve your ability to serve these students. Most of our suggestions require very little change in the way you teach your class. You are undoubtedly doing some of them already. Although some can be implemented in your classroom immediately, others do require either further preparation or cooperation with others. Our suggestions for change fall into three general areas: interacting with handicapped students, getting help from others, and modifying elements of your course or program.

IMPROVING YOUR INTERACTION WITH HANDICAPPED STUDENTS

In doing the research for this guide, we interviewed excellent vocational education teachers in six states. We spoke with teachers in all types of communities, in both large and small high schools, in vocational centers and comprehensive schools. When we asked the secret of their success with handicapped students, all of them made reference to their own teaching style before they talked about their curriculum or classroom organization. The two most common suggestions we heard are explained here. Each represents an action which you can take on your own, or which you can begin to emphasize more in your classroom.

Give students individual attention and encouragement

The most important thing you can do to help learning handicapped students succeed in your class is to give each of them plenty of individual attention and encouragement. Students with learning problems need more attention, and they respond to individual attention because it makes them feel important. Lots of positive reinforcement improves their self-image, too. You should never underestimate how important your reactions are to your special education students.

Maintain high standards, but be very patient

Try to walk that fine line between expecting a lot and yet forgiving a lot. It is crucial to make your class a place where students feel free to make mistakes. Especially if your special education students have just recently been mainstreamed, they are going to be very nervous about looking dumb. They will be reluctant to ask questions at first and may pretend they understand what to do when they do not. You will have to work hard to make

them understand that making mistakes is a part of learning a craft, although you do expect them to learn from these mistakes.

You may have to allow these students more time to complete assignments than usual. Many of these students simply must take longer, and do not work well under pressure. Try to adjust for this by allowing them longer to finish and giving only as many assignments as are really necessary.

On the other hand, maintain your expectations for a quality job. Although some special education students take longer to master a skill and some may never master the highest levels of skill you teach, there will be others who excel in your class. Try to maintain the same expectations for these students that you do for all of your students, so that they will push themselves as far as they are able. You may have to alter your expectations about how long it will take particular students to complete each unit, but there is no reason to pretend that a poor performance is a good performance.

MODIFYING THE VOCATIONAL COURSE

Your teaching style is very important to your students who have handicaps, but there are also some actions that you should take to make your class more effective. All of these suggestions can be pursued within a standard curriculum for a mainstream vocational education course. None should require permission from your supervisors, although some will be far easier if you get some cooperation from fellow teachers or learning specialists. The teachers we interviewed identified these modifications as being important to their success with handicapped students in the mainstream classroom

Teach employability skills

The vocational classroom can be a natural environment for teaching employability skills when it is organized like a workplace. Advanced vocational classes can be made to operate as much like a real job setting as possible, given the school setting. The specific features which you should use depend upon the way work is done in your occupation. Some features that make the classroom seem more like a place of work are the following.

Teachers can require students to account for their time very strictly, by punching a time clock or keeping a log book. Students quickly see how the "few minutes" they waste by being late add up to a day's work very quickly.

Institute a mock payroll system, based on time worked as well as quality of performance. The accumulated credits can be spent for something of value to the student: extra materials for a project, part of the semester grade, etc.

Students should wear appropriate clothes for the job, including uniforms or lab coats if that is the usual mode of dress for the trade. This simple device reminds students that they are "at work" and also helps each student feel part of a special group.

For craft courses, organize students into work teams with rotating foremen or supervisors, and play the role of inspector for each stage of a project. As inspector, tell the foreman what aspects of the job fail to "make spec" and allow the foreman to supervise the group for the day. Not every handicapped student will be comfortable playing the supervisor role, but do not assume as a general rule that they cannot.

Find projects for outside clients, so students can feel the pressure of deadlines and sense the importance of doing the job right.

Since employability skills are an important part of the curriculum, students should be graded on their progress in these areas as well. Below is an example of one way to give students credit for their progress with employability skills as well as job skills. While this approach may not work for you, it may give you some ideas about what to emphasize in teaching employability skills and how to evaluate student improvement.

EXAMPLE

GRADING ON APPROPRIATE WORK BEHAVIOR

At Locklin Vo-Tech in Milton, Florida the teacher of "Occupational Training" has developed an evaluation form which can be used for students in any of several industrial occupation programs. By using this form for student evaluation, she is able to grade students on their job-keeping skills as well as their progress in manual skills. She performs this evaluation jointly with the vocational teacher every two weeks, then discusses it with the student. Students are evaluated on their ability to perform a selected subset of the following tasks:

Follow verbal directions.
Recognize the importance of a positive attitude toward work.
Complete a task within a given time frame.
Assemble objects to specifications.
Assist in assembly line tasks.
Use a variety of hand tools.
Relate effectively with supervisor and co-workers.
Demonstrate proper use and maintenance of equipment.
Perform job skills without injury to self or others.
Complete a work task according to instructions.
Maintain rate and task quality to supervisor's specifications.
Verbalize appropriately within the work setting.
Select materials for the assigned task.
Perform the assigned task to specification.
Return equipment and supplies to correct storage areas.
Demonstrate positive work attitudes and habits and interpersonal relationships.

Match instructional materials to student abilities

Since many non-handicapped as well as handicapped students cannot read at grade level, try to find instructional materials which are written at a level closer to that of most students in the class. First ask the reading or the special education teachers for help in assessing the reading level of the materials you are now using, and compare this to the reading level of students in your classes. It is not unusual for texts to be above the average reading level for students in the course. You should ask the supervisor for your program area to help you find some alternative instructional materials, or possibly you can collaborate with other teachers in your district to make helpful handouts to supplement the text.

Use hands-on training

Teach through example and practice to the maximum extent possible. This will minimize the obstacles presented by student learning handicaps and maximize the chances for progress. Fortunately, vocational education classes are often dominated by hands-on activities anyway.

Alternate difficult tasks with easier tasks

Another way to provide opportunities for more frequent positive reinforcement is to be sure that shorter, easier tasks follow longer, more difficult assignments. Vocational courses are often designed so that projects get progressively longer and more involved, and rightly so. However, a brief project where students are likely to succeed provides a good antidote to the frustration that may accumulate during a longer project.

Break down assignments into smaller parts

Students with learning problems have greater difficulty pursuing assignments through a series of steps, and often are more easily discouraged by difficult tasks. When they get stalled in their progress, they are more likely to be disruptive or to feel that they will never succeed in the course. An effective way to prevent such problems is to divide long assignments into their component parts, treating each step as a separate assignment so that students feel a sense of progress while working on a longer project. This strategy does not compromise the original assignment or "water down" the required level of work, but it provides guideposts through long assignments which both handicapped and non-handicapped students will appreciate.

Introduce students to occupations that match their skill level

Career ladders have several steps which allow students to exit at different points in the vocational curriculum for different jobs. Not every trades and industry student will become a journeyman in a trade and not every student enrolled in a health occupations curriculum will be able to pass a state board examination. However, each can learn enough to perform a job that is on that career ladder: carpenter's helper or laundry aide, for example. Remember that "Each of the different skills can be a job." Develop a career ladder for your vocational program area, so students who have progressed as far as they can will know which jobs they can perform.

Develop a list of jobs for each level of competency, and award a certificate of completion appropriate to each student's level of achievement.

EXAMPLE

SPECIFIC OCCUPATIONAL OUTCOMES

In Oklahoma, all students are informed of the "occupational spin-offs" appropriate to each unit in their vocational courses. For example, the second unit in the Commercial and Home Services program at Francis Tuttle Vo-Tech Center is for clothing services, and has the following spin-offs: sewing machine operator, assembly line worker, seamstress helper, laundry worker, ironer, alteration apprentice, and clothesroom worker.

Teach academic and social skills needed for this occupation

With so many students lacking basic academic skills, you should expect to spend some time teaching those skills that are necessary for your occupational area. You should definitely plan to teach important measurement skills and mathematics necessary to the courses, such as fractions or decimals. You can also ask the resource and special education staff to work on these. It is also a good idea to spend time on reading, spelling, and understanding basic vocabulary terms for the occupational area.

You should also help students develop their social skills. Often, this is the area where handicapped students are most lacking. By asking students to work together you provide opportunities for them to develop their social skills. Some teachers also make a point of greeting students each day as they would in a work situation, giving students the opportunity to respond appropriately, make eye contact, shake hands, etc. You may well feel that social skill development is not a major objective for your class, but it is important that you help handicapped students in this area that can be so crucial to success on the job.

GETTING HELP FROM OTHERS

Although you are the central figure in improving vocational options for handicapped students, you cannot do this alone. All too often, classroom teachers are asked to make all of the efforts to improve their programs. Teachers sometimes encourage these expectations because they feel that asking for advice or assistance is a sign of their inadequacy. We do not intend this guide to be one more request for teachers to play "super-teacher" in order to make up for the inadequacy or lack of resources, program design, or support services. We urge you to read the sections for administrators, special education teachers, and professional support staff so you can ask others to do their part in improving your program. Below are some suggestions for specific areas where you can get help from others.

Ask for a teacher's aide

Handicapped students may need more time and guidance than you are able to provide for each student. Of course, many non-handicapped students also need extensive help at various times. Ask your principal or department chair about getting a teacher's aide. Some schools routinely hire aides when mainstream vocational education classes have more than three or four handicapped students. Many also hire aides for non-mainstream classes. Tell your supervisor how many handicapped students you have and how you would use an aide to help you serve them. This request may not be granted this year, but at least you have gone on record as needing special assistance. Maybe next year's budget will be more kind!

Recruit advanced students as tutors

Sometimes there is no money for teacher's aides, or you have trouble finding aides who are qualified to help in the vocational classroom. An alternative way to provide needed help is to have student tutors. Recruited from your advanced classes, a student tutor can report daily to an introductory or "basics" class to assist students who have questions or need extra help. These students should get credit for this effort. Students make excellent teacher's aides, and other students feel very free to ask them questions. It is important that the tutors not see themselves as "helping the handicapped," but as assistants for the whole class.

Consult with special educators about individual students

Don't forget that the special education faculty is an excellent resource for you in helping your students who have disabilities. Sometimes patience, a slower pace, and lots of encouragement are not enough for a student. Some students have disabilities that affect their learning style: maybe they cannot process oral information very well, or perhaps reading is the problem. Without finding out more about each student, you are not going to be able to get around such difficulties; the special education department is your source of information.

Ask the special education teachers for a summary of the learning potential and learning style of each of your students who has a disability. If you do not know for sure which of your students have special needs, you should ask to be told at the start of each year. Sometimes special education teachers do not want to prejudice you by revealing which are "their kids," but if you assure your colleagues that you want this information so you can help their students, then they will begin to cooperate with you. Special educators can be particularly helpful in suggesting ways for you to assist students to develop their social skills.

Notify resource teachers of student assignments

Your school should have teaching personnel assigned to provide special assistance to handicapped students in vocational courses. These staff may be called "special needs coordinators," "special needs consultants," or "resource specialists." They may be located in a classroom near you, a classroom at a feeder school, or in a resource center near you. Any

handicapped student in your class is eligible for their help, and may already be scheduled to spend time with them. Find out who these staff are, and arrange to talk with them *on a regular basis* to discuss progress or problems that should be shared. This allows you to adjust your teaching to the students' learning styles. You can also tell these staff how they can help their students with their vocational instruction.

The support staff in your district may be the special education teachers, but it is best if these staff are specialists in vocational special needs education. They are most effective when located in a resource room and responsible only for support services to students in the vocational program. Find out who these staff are and make use of them. Arrange to send an assignment sheet to the resource teacher or special education teacher on a regular basis, preferably weekly. Use this sheet to tell resource teachers what they can review with your special needs students. Possible areas include basic trade vocabulary, math or measurement skills, safety procedures, or learning the steps to a particular process. Anything which the student needs to practice or learn outside of your class is a good item for the assignment sheet. The example on the next page may help you design a form for your own use. (This form is adapted from "Memo from Vocational Instructor," *Designated Vocational Instruction,* Wisconsin Department of Public Instruction, Bulletin #6007, p. 14.)

Ask special educators to help modify teaching materials and curriculum

The chances are excellent that you were never trained to design materials and curriculum for students with handicaps, and you should feel free to ask for help. Your supervisor and the learning specialists should certainly be pleased that you are willing to make this effort, and will probably try to help you in any way they can. Find a special education teacher with whom you feel you can work well, and ask if he or she will help you to work on a small project. You may need to ask the special education supervisor to recommend someone for you. In some schools such a pilot effort has been the beginning of a very successful collaboration.

Work with special educators to develop parental understanding

Talk to the special education faculty about their work with parents. It may be beneficial for you to meet with a parents' group to explain your program and its requirements. High school teachers rarely spend much time with parents, but a small investment here could be worth a great deal. The more the parents understand, the easier your job will be. You may even find that some parents are interested in tutoring their children at home. If so, enlist the aid of the special education faculty to help you in assisting these parents.

Pursue staff development opportunities

The more you learn about student handicapping conditions and learning styles, the better you will become at deciding for yourself how to handle each student. Further professional development will benefit all of

your students, but especially those with particular learning problems. Try to persuade your school or district to make special workshops and further training available to you.

EXAMPLE

REQUEST FOR ASSISTANCE FROM RESOURCE STAFF

TO: Resource Staff
FROM: Vocational Instructor
STUDENT:
REGARDING:

____ Student progress
____ Behavior
____ Past assignment
____ New assignment
____ Test
____ Lab exercise
____ Resource assistance

COMMENT:

CONTACT ME:

____ Immediately
____ Before _____
____ At your convenience

FEEDBACK FOR ME ON STUDENT'S PROGRESS:

WHAT VOCATIONAL EDUCATION ADMINISTRATORS CAN DO

3

As a vocational education administrator, you are in a significant position to improve vocational options for many students with disabilities. Teachers can take some actions to do this in their own classrooms, but only you can organize the vocational program as a whole in ways that are very conducive to these efforts. Their efforts depend upon your leadership and your vision.

Our suggestions for your action fall into three categories: organizing vocational classes, structuring the vocational curriculum, and setting standards for your staff. Some of these suggestions can be instituted with your current level of funding, while others will require extra funding. Implicit in these suggestions, then, is that you also look into new funding sources through your state department of vocational education, the local business community, or the JTPA.

ORGANIZING VOCATIONAL CLASSES

Keep vocational classes small

The sheer size of many mainstream vocational classes is an obstacle to serving handicapped students well. Separate classes are usually fairly small, between ten and thirteen students per teacher and often an aide as well. In contrast, mainstream classes are often too large for effective teaching of special needs students. Quality suffers as ratios reach above eighteen to one, even in otherwise excellent programs. In order to facilitate the kind of special attention needed by handicapped students without jeopardizing the education of the non-handicapped majority, mainstream class sizes should be restricted. Teachers need to give extra attention to handicapped students, to spend more time with them than most other students require. In order to do this, the overall class size must be small enough that adequate time is available for each student with enough additional time to make that "extra attention" possible.

Limit the number of handicapped students in each mainstream class

There are several reasons to put a "cap" on the number of handicapped students allowed into each vocational class. The most important reasons are the necessity to reduce teacher burden and to assure high quality instruction in the mainstream setting for all students. Special education students should comprise no more than a third of the enrollment in a mainstream class. When more than one-third are from special education, the class ceases being a mainstream class and becomes a modified vocational class. If handicapped students are to benefit from mainstreaming, then we must not over-enroll them in certain vocational areas. Classes

with a high proportion of handicapped students pose a difficult teaching task and often become undesirable alternatives for non-handicapped students. We have seen this happen especially in food service classes.

When a "cap" is imposed, handicapped students can be encouraged to seek other alternatives to keep enrollments from going beyond the cap. In the past, it has been far too easy to assign handicapped students to a few program areas where we all "know" they can succeed or where the teachers are unusually sympathetic. Assignment to programs should be based on student aptitude and interest, with a "cap" in place to preserve a mainstream class composition. When students genuinely prefer the overcrowded program areas, then additional classes should be opened to accommodate that interest. Otherwise the teachers in those areas are overburdened, the program becomes labeled as "special ed," and non-handicapped students flee to other program areas.

Arrange for aides or tutors

Even when vocational classes are small, teachers with several handicapped students may need extra assistance in the classroom. The need for extra classroom personnel depends upon the students' abilities, the number of handicapped students, the size of the class, and the structure of the program. It may be helpful to have rules for when teachers deserve an aide, or it may be preferable to take each situation individually. Some budget money should be set aside for extra assistance, unless the help can be arranged for free, as with tutors or parent aides. School administrators should be sensitive to the need for extra assistance and should develop criteria for assigning and selecting that assistance.

STRUCTURING THE VOCATIONAL CURRICULUM

Create mainstream and separate options

Non-mainstream vocational classes should be available in enough variety to provide real options for students who need a somewhat restrictive environment. It may not be feasible to provide every vocational course

EXAMPLE

MODIFIED VOCATIONAL CURRICULUM

New York State has established a core vocational curriculum which offers a regular and modified program in each vocational area. In "modified" courses the course content is the same as in mainstream classes, but the material is made more accessible by providing alternative instructional materials. Most important, the pace of the modified class is slower. Class size is also limited, with a maximum of twelve students per teacher in the more advanced of the "Modified I" classes and twelve students per teacher and aide in the "Modified II" classes. In a sense both programs are mainstream, since any student who needs extra help can enroll in a modified class, whether or not they have been formally identified as handicapped. As a result any student who needs special accommodations can benefit from the slower pace, smaller class size, and different instructional strategies offered.

sequence in both a mainstream and non-mainstream setting, but there should certainly be a clearly differentiated range of non-mainstream options.

Establish non-mainstream orientation classes

During an introductory year in a small, non-mainstream class handicapped students can learn basic occupational skills and become familiar with the procedures in vocational education. An introductory year is especially important to the many handicapped students who have not been mainstreamed before. Introductory classes must be small enough that students can get the attention they require without waiting for machines or equipment. The introductory class should be taught by the same teachers who will teach the more advanced courses, so that the students can become familiar with the teacher's personality, teaching style, and expectations. This also gives the vocational teacher an opportunity to become familiar with the student's particular learning style in the small setting of the introductory class. When handicapped students have the advantage of extra preparation in the introductory year, they perform far better once they are mainstreamed into the occupational sequence of their choice.

The introductory course can be structured in various ways. Some schools use a survey course in several vocational areas where the student has an interest. Others simply have a modified version of the first year. The best approach seems to be a survey approach, but one which is occupationally focused rather than broadly focused. For example, the course could be an introduction to general office work, accounting, and typing rather than a general "Introduction to Business." In the survey course, smaller class size is highly desirable. Your district may not be able to offer classes as small as those described in the following example, but try to limit class size to the extent possible.

EXAMPLE

Special Survey Courses

The introductory survey for the technology program in Edgerton, Wisconsin consists of four one semester classes, each taught by both a vocational and special education teacher. The four courses are in manufacturing, construction, communications, and energy/power/transportation technology. These are the four areas of technology from which students later choose to concentrate in their advanced vocational training.

The introductory survey course for trade and industry occupations in Wood River, Illinois consists of four nine-week units, one in each area of the trade and industry curriculum. All handicapped students who wish to pursue an occupation in one of these areas must take the year of survey, where the classes usually have fewer than ten students and have the assistance of advanced student tutors.

Choose vocational assessment techniques that will produce practical results

As a vocational education administrator, you will probably spend considerable time choosing assessment packages. Deciding among the various commercial packages is not easy, nor is designing your own. Hopefully, you will be working as part of a team in choosing assessment instruments, in cooperation with special educators and counselors.

Regardless of which assessment materials you decide to use, it is important to see that the results of each student's assessment are used to shape the instruction and services in his or her vocational program. When choosing a particular assessment approach, you should ask yourself whether the results will be in a form that can be useful to teachers and support staff. There is no point in spending your scarce resources on a sophisticated assessment system if the results are so detailed and technical that teachers cannot use them. "Assessment" does not necessarily require long, formal examination in a specially designed facility; it does require a systematic measuring of each student's abilities and a matching of those abilities to the skills required for various programs or jobs. An appropriately designed assessment system will provide teachers and support staff with insights into the student's interests, strengths, and weaknesses. It will also produce the kind of information needed to design an appropriate program for the student.

Tie instruction and support services to vocational assessment

Think of assessment as a process rather than a product. Assessment should be used throughout the student's career as a source of information for the student, the parent, the vocational instructor, and the support staff. Although the word "assessment" connotes a lengthy process of special testing to many educators, in fact the essence of assessment is simply the evaluation of each student's abilities and potential for the purpose of selecting appropriate career options, vocational programs, instructional materials, or support services. Assessment can respond to different needs, depending upon the stage of the student's education: (1) an initial assessment before high school to determine vocational aptitude and readiness, (2) assessment after an introductory course for program placement and planning, (3) ongoing assessment during the main vocational sequence to monitor student progress, and (4) assessment for placement and transition services towards the end of the student's time in secondary school.

The first two assessments come before and after the introductory vocational class. Results from the initial assessment will help the student's IEP committee decide when the student is ready for vocational education. The second phase assessment results will help the committee decide which specific vocational program is best, and whether the student is ready for mainstream or modified vocational classes.

Once a student is placed in a program, existing assessment results can be communicated to the vocational teacher for a better picture of the

student's strengths and weaknesses. This knowledge will help the teacher choose instructional approaches consistent with student learning styles. Assessment results should also be communicated to support staff so that they can choose remedial work appropriate to each student's needs.

The assessment staff should be ready to do further testing to re-evaluate the assessment results for any student who is not performing in the vocational classroom, either at the request of the instructor or in response to their own concerns. Further testing may result in a different program placement or, more commonly, in a set of recommendations for support services and remedial work. If the assessment staff also provide support services, then the two are very easily connected.

Finally, as part of the transition process, another vocational assessment may be needed to determine what type of employment the student can handle and what areas may need extra work.

EXAMPLE

CONNECTING ASSESSMENT TO INSTRUCTION

Formal assessment is an integral part of the educational process at the Mission Trails Regional Occupational Center in Salinas, California. Each handicapped student planning to attend the ROP receives a half day assessment for program placement. This assessment produces scores for all students in each of several areas and matches this to the minimum scores needed for success in the vocational program chosen. These results are used to counsel the student making a program choice, but are not used for screening. Students are enrolled in the courses that interest them, and the assessment results are given to the teacher along with a list of teaching strategies appropriate to each student's handicapping condition.

The assessment staff are not isolated in a special center, but are an integral part of the vocational program. The Center assessment staff are responsible for the success of the students they place in vocational programs. Since they are also the support staff, they use assessment results to develop appropriate support services. They monitor students very closely during the first year in a mainstream classroom; if any problems develop, they intervene quickly. Intervention by the assessment staff can include provision of support services, recommendations for specific teaching strategies, further assessment, or a different placement.

Include multiple goals in the vocational curriculum

Vocational education courses are designed to teach occupationally specific skills, but the vocational curriculum must also focus on other goals. Vocational education classes must teach some academic skills. Teachers should expect to spend some time teaching the basic vocabulary of their field, as well as some of the basic math skills. Even if there is help in the resource room, handicapped (and many other) students will profit from extra time spent on related basic skills during the vocational class.

Many special education teachers told us that they worry more about their students' ability to keep their jobs than their ability to find them. Many

learning handicapped students do not relate well to their peers or have problems accepting authority. Since part of the problem is simply poor social skills, vocational teachers should make a conscious effort to help students with these. The strategy most commonly practiced in advanced vocational courses is to put handicapped students in work groups with other students. By functioning as part of a team, they learn to accept responsibility for their share of the project.

Since keeping a job requires maturity and good work habits, good vocational classes also focus on employability skills. A serious, work-like atmosphere helps the students develop good work habits. A serious atmosphere in the vocational lab also contributes to safety. You can also include a job seeking unit in each advanced vocational class.

EXAMPLE

MULTIPLE GOALS IN A FOOD SERVICE CLASS

At Mission Trails Regional Occupational Program in Salinas, California, the Restaurant Sales and Management program has a variety of instructional goals. This broad focus is illustrated by the distribution of time over the teaching units:

PERSONAL DEVELOPMENT	11%
SANITATION AND SAFETY	11%
NUTRITION AND MEAL PLANNING	5%
BASIC SKILLS NECESSARY FOR JOB PERFORMANCE	11%
FOOD PLANNING PREPARATION AND SERVING	14%
FOOD SERVICE JOB SKILLS	14%
JOB INTEREST AND GENERAL EMPLOYMENT SKILLS	11%
ON-THE-JOB TRAINING	17%
EMPLOYMENT OPPORTUNITIES	3%
CONSUMER EDUCATION AWARENESS	3%

Establish paid work experience as a part of each vocational program

Every handicapped student who is not planning to pursue a postsecondary education should have the opportunity to participate in a paid work experience program. There are important incentives to developing those skills in the work experience situation that do not pertain to the classroom situation. Only on the job do students get to and from work on their own, get along with other employees on a daily basis, know that employers are counting on their performance, and feel the incentive of real pay for real work. Occupationally specific vocational programs should include work experience, and it is especially important that handicapped students participate so that they can benefit from the extra supervision which the school work program will provide. It is important that this work experience be related to the vocational program, not simply a part-time job. The work experience should be an integral part of learning advanced vocational skills, a time when the student can become familiar with the latest equipment and technology of the occupation.

PROVIDING STAFF LEADERSHIP

Make appropriate teaching of handicapped students a part of teacher evaluation

As the director of vocational education, you are in a position to set teacher priorities. Teachers who make special efforts with handicapped students often feel their successes are not appreciated by their supervisors, while teachers who are not interested in accommodating different learning styles have no incentive to do so. By creating a special needs component to your teacher evaluation you can demonstrate that this area is important, encourage teachers to give it some thought, and reward teachers who serve handicapped students well. By mentioning your concern for this goal in job announcements for new teachers, you can further demonstrate its priority status and recruit better candidates.

EXAMPLE

Special Needs Evaluations

IN CLASS, DOES THIS TEACHER:

- Give handicapped students individual attention and encouragement?
- Maintain high but realistic standards for handicapped students?
- Exhibit sufficient patience in dealing with handicapped students?
- Teach employability skills as part of the regular curriculum?
- Match instructional materials to student abilities?
- Use hands-on training as much as possible?
- Alternate difficult tasks with easier tasks?
- Break down assignments into very short tasks?
- Introduce students to occupations that match their skill level?
- Teach academic and social skills needed for this occupation?

OUTSIDE OF CLASS, DOES THIS TEACHER:

- Consult with special educators about individual students?
- Give student assignments to resource teachers on a regular schedule?
- Work with special educators to develop parental understanding?
- Pursue staff development opportunities concerning special needs?

Establish in-service education programs

In-service programs are needed because most vocational teachers do not have sufficient knowledge to work with handicapped students, and many still wonder what approach they should take. Some of the most effective in-service programs involve "teachers teaching teachers," because teachers orient their instruction toward practical solutions and local needs. Participants feel freer to ask questions, see the value of the suggestions more readily, and can more easily contact those conducting the workshop for later discussion and advice. This kind of workshop also provides local recognition for teachers who have become expert enough to instruct their colleagues.

Regional and state-wide in-service programs sponsored by state departments of education and state universities are also helpful in giving vocational teachers new ideas and approaches. Some schools pay for teachers to attend conferences and courses of this sort.

If you sponsor in-service education programs, you will want to be sure they meet teachers' needs. Ask vocational teachers what kind of help or information they need before you decide what to discuss at the in-service programs. This effort is especially important if you get outside consultants or university personnel to give the workshop. The questionnaire below was developed by staff at the Sauk Area Career Center (SACC) for a series of workshops given in 1976, and proved useful in gearing the training toward faculty needs. The three items which were indicated as important by the largest number of teachers at the Sauk Area Career Center are the following: suggestions for helping students with inadequate writing, reading, or math skills, developing individualized learning packets, and developing audo-visual presentations.

EXAMPLE

QUESTIONNAIRE FOR IN-SERVICE WORKSHOPS

PLEASE RATE THE FOLLOWING SUGGESTED IN-SERVICE TOPICS SO WE CAN SCHEDULE ACTIVITIES THAT WILL NOT BORE YOU!

Rate each one as follows:

1. Never heard about so can't say
2. Never heard about but sounds interesting
3. Heard about but want to hear more

_____ Ways to modify materials & techniques for students who learn best through either the auditory or the visual channel.

_____ Ways to identify a disadvantaged student enrolled in your program.

_____ Suggestions for helping students with inadequate writing, reading, or math skills to succeed in your program.

_____ Supportive services available to students from Special Needs Team.

_____ Ways to analyze student's strengths and/or weaknesses in order to more effectively meet their needs.

_____ Developing individualized learning packets for your program.

_____ Analyzing learning atmospheres for students with special needs.

_____ Ways to alter inappropriate behavior in students presenting discipline problems.

_____ Programs geared toward developing a more positive attitude in students about themselves.

_____ Procedures to re-evaluate a student who finds himself in a program he does not appear to be able to handle, even with supportive services.

_____ Developing audio-visual presentations to teach components of your training program.

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WHAT SPECIAL EDUCATION TEACHERS CAN DO

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As a special education teacher, you can make a big difference in your students' success in vocational education. Part of your role is to prepare your students for their vocational training, and especially for the experience of participating in a mainstream class. Equally important is providing assistance to your students with materials they find difficult and providing assistance to the vocational teachers in helping your students during the vocational class.

Our observations of vocational programs where students with disabilities are succeeding lead us to make the following recommendations to special educators interested in improving the employability of their students. The suggestions of this section apply to all special educators, whatever their level of responsibility. Individual teachers can follow these suggestions in their own classroom or in individual efforts, while supervisors can see that every teacher institutes some of these changes.

Whatever your level of responsibility, you can improve your students' vocational options through your role as an IEP committee member and as the designer of the special education curriculum. These roles are familiar to special educators, and are discussed first. You can also serve an important function as a consultant with your abilities as a learning specialist. This role, which is less familiar to some special education teachers, is discussed at the end of this section. We urge you to read the next section to learn how special educators in support positions provide similar services.

AS A TEACHER

Prepare your students for mainstream vocational classes

Special education students sometimes find it difficult to adjust to mainstream classes, even when they are able to handle the curriculum. Mainstream classes are usually larger than separate classes, and the teachers rarely have any expertise in dealing with handicapped students. You need to prepare your students for this experience in three ways: by working on their basic skills, by helping them with social skills, and by raising your expectations for their efforts. Although work on basic and social skills is already a part of the special education curriculum, it is not always clearly focused on the application of basic skills to vocational tasks. You will probably find it more difficult to communicate higher expectations to your students, but this effort is important to their future.

We interviewed a number of special education teachers who have done a good job preparing their students for mainstream vocational education. They recommend that their colleagues resist the temptation to protect

special education students. Instead, they should maintain the same level of individual attention as the students progress through school. The small size of special education classes makes this possible, and the training of most special educators stresses the importance of that level of individual attention. However, students must be prepared for the mainstream situation by learning to wait for help and asking for help less frequently. To the extent possible, students with handicaps should be helped in learning how to cope with the competitive demands for teacher attention that they will experience in the mainstream classroom.

Teach units in career exploration

You can prepare your students to think about eventual career options and to begin preparing for their first jobs. We do not suggest that high school students, whether handicapped or non-handicapped, should be expected to make long-term career choices. They can, however, make choices about their training and what kind of employment they will seek after high school. Whether the student has expectations that are realistic or unrealistic, units in career exploration can help students establish both short-term and long-term occupational goals. Career exploration is a prerequisite to an informed decision about whether to take vocational courses and, if so, which program to pursue. Students need to comprehend what is involved in various lines of work, what skills they will need, and what skills they therefore need to develop. Career exploration ideally involves some sort of assessment to match student abilities against job requirements, in addition to information about employment options. It is also helpful to use employer interviews, job shadowing, and field trips as part of these units.

AS PART OF THE IEP TEAM

Maximize opportunities for mainstreaming your students into vocational education

IEP committees should seriously consider mainstream vocational education as an option for each mildly handicapped student, and many moderately handicapped youth as well. Mainstreaming can have a very positive effect on the self-image of these students. Students who have disabilities often feel stigmatized when they are separated from their peers, so they enjoy the opportunity to be "just like the other kids" by attending regular vocational classes. Many vocational education teachers assert that most students who have handicaps perform better simply because they are no longer treated differently or with lower expectations than the other students, so that mainstreaming helps them to improve their performance. Furthermore, functioning in a mainstream work setting is necessary to developing real employability, so this is an important experience.

Involve other professionals in IEP conferences

The IEP conference is a good opportunity for coordinating with other professionals who have or will have responsibility for a handicapped student. Certainly a vocational rehabilitation counselor should participate when the student is either a current or potential client of the local rehabilitation system.

Although vocational education teachers may not always have time to participate in IEP conferences for their students, the meeting should include at least one representative of the vocational education department, perhaps the special needs coordinator with responsibility for that student.

Hold transition conferences for all handicapped students

As part of the transition process for each student, bring together all professionals responsible for that student, preferably including the student and his or her parents. The eleventh grade IEP meeting can be structured as a "transition conference" to meet this need. This conference should also include the student's vocational instructor and the district's job placement specialist. If each handicapped student is the subject of a series of transition conferences during the last two years of high school, this will be an opportunity for school personnel to pool their knowledge of the student and the work environment to plan for the future and identify sources of assistance.

Work closely with parents and families during career exploration and transition planning

Families need to be involved in the transition process. Some parents need to realize that the school will not be taking care of their child any more, while others need to be persuaded that their child should become more independent. Since each case is different, you should make an effort to meet with families more often during the last year of school than you normally do. Make them aware of the the community services which are available to their child for finding jobs and for further instruction. If possible, continue to provide this kind of communication even after the student leaves school, perhaps in cooperation with a local community agency.

EXAMPLE

CONTINUING SUPPORT BEYOND HIGH SCHOOL

At Francis Tuttle Vo-Tech Center in Tulsa, Oklahoma, the Commercial and Home Services teachers have cooperated with the Building and Grounds Maintenance teachers and local officials from the Mental Health Services to form an alumni association and support group for students and graduates of the programs. The group meets monthly at the Center and often invites speakers from local agencies or the university. This group provides a forum for a variety of needed activities for both students and parents: socializing, sharing of experiences, assistance to students in transition, and instruction for parents.

AS A LEARNING SPECIALIST

There are three aspects to helping improve the way mainstream vocational education programs serve students who have disabilities: (1) knowing and explaining what should be done, (2) marketing your assistance to your colleagues in vocational education, and (3) selling your supervisors on the importance of funding or supporting such efforts.

It is especially important to convince vocational education staff that you have something of value to offer them and their students. Vocational teachers may resist your advice because they feel that you do not understand their situation. Even if they are open to suggestions, they may be reluctant to seek help because teachers often feel they should solve their own problems in their own classroom. You will have to overcome such reluctance and resistance in ways that seem appropriate and effective in your situation. Sometimes an agreement between the special education director and the vocational education director for an entire school district is required to achieve cooperation; sometimes department chairs at the school level are the best instigators. Often, however, the most effective approach is for two teachers to begin working together, both improving the educational experiences of their own students and setting an example for their colleagues. As an individual teacher offering your expertise, you can make a great difference to your own students' vocational options. Be forewarned, however, that you may have to sell your services as a consultant to others.

Help your students with materials, skills, and assignments from their vocational class

When your students are enrolled in vocational education, they will profit immensely from your assistance as a resource teacher. First, ask the vocational teacher what basic skills you should emphasize or what special vocabulary your students need to learn. Vocational teachers are sometimes reluctant to drill their entire class on materials which many students have mastered, so if your students need extra work you may have to give it to them yourself. Second, ask the vocational teacher to keep you informed about written assignments, exams, or other academic activities where you could help your students. Some teachers may allow you to read exams to students with reading problems, but others will feel this is not fair. Let the teacher know that you would like to do what you can to improve your students' performance, and jointly decide what kind of assistance you should provide.

Help the mainstream vocational education teachers to serve your students

Vocational education teachers often are not sure how they could change their classes to serve handicapped students better. It is likely that your colleagues in the vocational department will welcome such an offer, if it is made in the spirit of cooperation rather than judgment. You might choose to concentrate your efforts on one vocational area or group of areas, because you will need to learn about that curriculum in order to help the teacher. If you can persuade your principal to allow or to establish a team teaching arrangement in an introductory class, you will have the time to learn a great deal about the course material while teaching your team member how you deal with particular students. Alternatively, perhaps you can persuade the district to pay for both of you to spend some extra time on the task. Obviously, financial support will enable you to do more, but even a small amount of time will pay off handsomely with a vocational teacher who is interested in your efforts.

Vocational education teachers are rarely trained to assess the reading level of instructional materials or to create instructional materials in a variety of media. You have drawn on your expertise in these areas to reach students in your own class, so you have the skills to help your colleagues in vocational education create and modify teaching materials for your students. We have visited schools where one qualified special education teacher and one interested vocational education teacher cooperated to reduce the reading level of introductory course materials by several grade levels, thus making the course accessible to a wider range of students. If you can find a vocational teacher who is interested in making this kind of effort, you can provide the required expertise.

Help vocational staff develop new instructional materials

When your students are enrolled in vocational education, you should give vocational teachers information about these students before school begins. Tell vocational teachers which of their students have disabilities and the learning characteristics of each. If your district has a formal vocational assessment, the informational task may be done for you, but often it falls to the special education teacher to make this effort. Below is an example of a brief communication about student abilities. This form is adapted from "EEN Notification Program" *Designated Vocational Instruction,* Wisconsin Department of Public Instruction, Bulletin #6007, p. 23.

Contact vocational staff at the start of each year

EXAMPLE

STUDENT INFORMATION FOR VOCATIONAL TEACHERS

SPECIAL EDUCATION NOTIFICATION

TO: Staff Members Who Have a Special Education Student in Their Class

FROM: Special Education Teacher

_____has been identified as _____ (learning disabled, mentally retarded, behavior disordered, etc.). He/she is enrolled in your _____ class, _____ hour. This student's reading level was assessed at _____. Adding to this low reading level may be a lack of organizational skills, poor study skills and often times poor penmanship. Although the student has a set curriculum within my program, I would like to assist this student to accomplish the goals of your curriculum also. Please notify me of unit tests or projects that you may have in your program. I will be contacting you about specific help for this student within the next week.

Set up a communication system with vocational staff

You should communicate weekly with the vocational staff to find out what help these students need. Reporting back to vocational staff on student progress is also a good idea. Many teachers accomplish these goals through a weekly assignment sheet which passes from vocational to special educator on Monday with assignments and requests for help, then back from special to vocational educator on Friday with comments and suggestions. You may be able to communicate regularly in person, and that is ideal. If not, a brief checklist might serve as a monitor.

If your school district has support staff affiliated with the vocational program to help students with disabilities, establishing communications should be a little easier. Someone may already be serving as a liaison for you; if not, ask vocational education teachers to keep in touch with you about your students. Even if they are getting some extra help already, your students will profit a great deal from your involvement in their vocational education. The memo below is one way to offer help each week to the vocational instructors. This form is adapted from "DVI Memo To Vocational Instructors" *Designated Vocational Instruction,* Wisconsin Department of Public Instruction, Bulletin #6007, p. 13.

EXAMPLE

OFFERING HELP TO VOCATIONAL TEACHERS

MEMO TO VOCATIONAL INSTRUCTORS

TO: Vocational Instructor
FROM: Resource Staff
RE: Student in Your Mainstream Vocational Class
DATE:

Do any students need special assistance in your class this week?
_____ yes _____ no

Do you have materials or tests that need modification?
_____ yes _____ no

Will you need assistance from me in your classroom planning this week?
_____ yes _____ no

Please return this to my mailbox.

Thank you

Ensure the quality of the separate vocational curriculum

Students in special vocational classes probably need less help from you than do mainstreamed students, even though the students in special classes may need more help overall than do the mainstreamed students. Remember that special vocational classes are usually small, and are often taught by teachers well trained in special education. Yet you should offer to

consult with those who teach the separate program, as your expertise may be valuable there as well. If the vocational teacher is interested, you could help redesign the course or instructional materials for the separate curriculum. If your school does not have a separate vocational program for those who should not be mainstreamed, you should see that one is established.

Provide in-service training to vocational teachers and aides

Vocational teachers will profit greatly from your advice and suggestions in coping with particular students. They will also profit from a more general sharing of knowledge during in-service training. Some vocational teachers feel that in-service workshops on student learning problems and possible solutions are very helpful, so this is something to explore with vocational teachers in your school. Even if formal in-service sessions are not scheduled, you can increase vocational teacher knowledge through joint department meetings or individual conversations. The "teachable moment" is usually when your colleague is struggling with a particular challenge, so informal regular communication can lead to opportunities for effective interdepartmental communication.

A strategy which has proved successful for others is to place one of your most capable special education students in a vocational class and provide the instructor of that class with individualized, informal in-service training to insure the success of that student. This technique can open vocational areas that were previously closed to students with handicaps; it can also help initiate new vocational teachers.

We cannot emphasize strongly enough the need for you as a teacher to come out of your classroom in your efforts to improve your students' vocational options. As an advocate for your students and especially for their mainstreaming, you must sell your ideas to your colleagues. If you have five hours of class to teach each day, you may feel you cannot implement many of the suggestions in this section. But begin with small steps, and you may be surprised at your own impact. In a well-designed program, the special education teacher is only one member of an entire team of specialists who work with both handicapped students and vocational teachers in an effort to make vocational programs work for students with special educational needs. Perhaps your efforts as an individual will help persuade your supervisors to hire professional support staff with the time to perform these tasks. The next section discusses the duties of such staff, and is worth your examination.

WHAT PROFESSIONAL SUPPORT STAFF CAN DO

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The last section gave suggestions for ways a special education teacher can serve both students and vocational education teachers as a resource person. These tasks may be considered beyond the role of the special education classroom teacher, because they require a great deal of interaction with other teachers and may require some travel from school to school. Some schools provide release time to their special education staff for the purpose of talking with vocational teachers and monitoring student progress. More often, however, schools interested in improving vocational options for students with handicaps will hire additional special education professionals or vocational educators to serve as support staff or coordinators for handicapped students in vocational programs.

Together with the special education teacher and the vocational education teacher, these professionals comprise a team that is responsible for improving the employability of students with disabilities. It is certainly better for different individuals to share responsibility for support staff roles, since classroom teachers rarely have the time to fill them. Yet different personnel cannot serve the same students effectively without a great deal of communication and coordination. For this reason, many of the suggestions in this section have to do with communication.

Support personnel for vocational education may serve a variety of functions, depending upon the way the district is organized and upon local needs. Three of the most common positions filled are those of special needs coordinator, resource center teacher, and job developer. Any of these three may also perform vocational assessments. In this section, we make suggestions for what a professional in each of these positions can do to improve the employability of students with disabilities. Even if your job encompasses more than one role, these suggestions should help you decide what tasks you should perform in your school.

AS A SPECIAL NEEDS COORDINATOR OR CONSULTANT

The function of the special needs coordinator is to place handicapped students into appropriate vocational programs and to give other professionals the information they need to make mainstream vocational education work. Special needs coordinators rarely engage in direct teaching, but spend most of their time making it possible for others to provide appropriate instruction. In a smaller district or school, the coordinator role is often performed by a classroom special education teacher, a counselor, or a resource center teacher. In large, urban school districts there may well be one or more coordinators in each school, in addition to supervisors at the

district level. A special needs coordinator can serve up to one hundred students, as long as no direct teaching is expected.

Help vocational teachers understand each student

Vocational education teachers often do not tailor their instruction to students' needs because they do not know what those needs are. Be sure to communicate students' needs to the teachers at the start of the school year. A short learning profile of each student is helpful, followed up by some discussion and a chance to ask questions.

Tell special education teachers and other support staff how they can help

You are the communications center concerning each of your student clients. If you also provide extra instruction to your students, you do not need to communicate with special education teachers very often. If, however, your job is mainly to place and monitor students, you must communicate regularly with those who do provide extra help or set up a system of direct communication between these staff and vocational teachers. Resource room teachers and special education teachers should know where their students need extra help so they can spend class time on those skills. Regular communication between vocational and special education teachers is helpful, even if only through checklists and memos. Check in personally with each vocational and special education teacher about each student as often as possible, and be sure that each party is obtaining sufficient information to do his or her part.

Help place students with handicaps into vocational programs

If you are to be the liaison between vocational staff and others for handicapped students in vocational education, you should also be a part of the placement process. Your knowledge of the vocational program and teachers is important to a proper placement, and participating in placement will teach you more about each student. You should communicate with vocational assessment staff so that you can incorporate that information into the placement decision.

Monitor classroom placements closely

After students are placed into vocational education, monitor their progress closely. You will need to check up on them often, especially at the start of the year. If there are problems, you should act early to avoid an awkward or painful situation for both student and teacher. You may recommend special assistance, or make a different placement altogether. Vocational teachers often feel that support staff ignore students with disabilities after placement, so you should show your interest and commitment to helping both student and teacher to make the placement work.

Assemble resource materials

Vocational education teachers are often willing to accommodate students with disabilities in their classes, but sometimes have trouble

finding appropriate instructional materials or curriculum plans. As a special needs coordinator or supervisor of coordinators, you should develop a supply of resource materials that will help interested teachers serve the handicapped. This library of materials could be housed at the district office, but the coordinator can distribute lists of these materials to vocational teachers and deliver these materials to requesting teachers. Often your state department of vocational education will have a special needs division that can help you locate appropriate references or catalogues of instructional materials. Teachers are often too busy to look for special materials, but if these are readily available then more teachers will certainly be interested in using them.

Recommend modifications to vocational courses

Sometimes students with disabilities pose special teaching challenges that regular classroom teachers cannot recognize, due to their lack of specialized training. It is up to you to communicate such special requirements to the teacher, to make suggestions about ways to accommodate them, and to evaluate how well these adjustments are working. Since the vocational education teachers are your peers, this advising task will require your diplomacy as well as your expertise. It is also good to consider the implications of your suggestions in terms of teacher work load and the availability of teacher time for each student. In addition to giving advice, ask the vocational teachers what additional staff or materials they need and see if you can help them obtain these.

AS RESOURCE CENTER STAFF

Resource center staff provide direct assistance to handicapped (and perhaps non-handicapped) students enrolled in vocational education. Learning resource centers should be located near the vocational classrooms so that students can go there on a pullout basis or as part of their class schedule. At a small vocational school, the members of the resource center staff usually function as special needs coordinators, but the two roles are somewhat distinct. The actual services performed at the resource center must depend upon the students' needs and the vocational program itself, but may include any of the following: further training in basic academic skills, reading tests to students, helping students with written assignments, providing a quiet environment for individual study, and assisting students to master the vocabulary of the occupation. We have even seen resource center staff members helping students to practice some occupationally specific manual skills which the staff learned in order to help their students. For example, ends for different kinds of plastic pipe were kept in one resource center we visited, and students in the plumbing class used these ends to practice various fittings. The suggestions below do not expand upon the specific services you should offer, but do provide some direction for deciding what services to provide.

Ask vocational teachers what extra help their students need

There is no substitute for the teacher's view of the help your students need. Tell vocational teachers, either orally or in writing, the kinds of services you can perform so that they can indicate which services seem most helpful to them. You have the expertise to provide special assistance, but the classroom teacher is in a better position to know what subjects or skills you should cover. You will have to balance teacher requests against the time available, but do take them into consideration as much as possible. The memo below is one way vocational instructors can communicate what they would like you to do. In designing your own memo, you can list those services which you would like to perform and allow the vocational teachers to indicate which they need. This form is adapted from "What Do You Want The DVI To Do For You?" *Designated Vocational Instruction,* Wisconsin Department of Public Instruction, Bulletin #6007, p. 45.

EXAMPLE

DETERMINING SERVICE PRIORITIES

What Do You Want the Resource Center Staff to Do for You?

Please indicate how important the following services are to you this year.

_____ Administer tests orally to some students.

_____ Tape record the textbook or other reading materials.

_____ Provide additional instruction in the use of measuring tools.

_____ Highlight technical vocabulary in the textbook.

_____ Teach technical vocabulary to some students.

_____ Involve you in writing IEP objectives.

_____ Help students answer questions on worksheets or in textbook.

_____ Provide individual instruction to some students concerning shop safety rules.

_____ Help students in the classroom (lab).

_____ Other (please specify).

_____

(your name) (department)

Learn as much as you can about your students

Draw on every resource available to learn more about the handicapped students enrolled in vocational education so that you will be better able to help them when it is needed. Read their files and talk to their special education teachers to learn about the kinds of help they are likely to need and the way you can best approach them. If the student has taken vocational education courses before, talk to their former teachers. You have the freedom to tailor your approach to each student, so learn enough to make the best use of your time and effort.

Learn as much as you can about the vocational areas your students are studying

If you spend some time learning the vocational skills your students will learn, you will be more effective and command more respect from both your students and their vocational instructors. If you are the only resource staff, you will need to limit the amount of time you spend on each area; if you have colleagues, you should divide up your case load by vocational area so that you can concentrate on a number of similar vocations. For example, three staff members could divide up the vocational curriculum so that one specializes in the industrial trades, one in business occupations, and one in health-related occupations. Many resource persons read the text book for each class their students may take. Since there may not be time to do all of the classes the first year you start, you can begin with the class which has most of your students and progress from there.

Observe your students in the classroom and shop or lab setting

Watch your students function in the vocational classroom, and especially in the lab setting, to get a clearer picture of their strengths and weaknesses. By visiting their classes, you demonstrate to the students that you are interested in their training and to the teachers that you are serious about adapting your help to the curriculum. (Your presence may annoy the teacher at first, so be sure he or she understands your purpose in being there.) If there is time, you can function as a teacher's aide during some class sessions, an effort that will be richly rewarded in student learning, your increased knowledge of the vocation, and the vocational teacher's increased understanding of how to help students who are having problems.

Keep records on each student you help and report to the vocational teacher regularly

A file on each student is the easiest way to keep track of their progress. This file is a good way to organize information on students' abilities, communications from their teachers, and notes about your work with them. A monthly note or chat with the instructors will let them know what you have been doing and give them a chance either to ask for more help or to tell you the help is paying off.

AS A JOB DEVELOPER OR COOPERATIVE EDUCATION COORDINATOR

The job developer does much more than place students in jobs. Job developers must also teach their clients how to get jobs, assess students' abilities and interests well enough to make good placements, coach their clients once they are on the job, and develop good community relations to open up new positions for students with local employers. Job developers in some school districts specialize in the type of student they place, while in others they are responsible for a range of students. The suggestions below apply specifically to job developers specializing in the handicapped, but are also applicable to job developers with non-handicapped clients.

Establish contact with local employers

Before you have a particular student to place, talk to local employers about your work. Ask about their entry level positions and the kinds of skills needed to fill them. Tell them you will be placing students for work experience and for permanent employment; work with them to define positions which you could fill for their company. Start with the employers on your local vocational advisory committees, and ask for referrals from them as you contact more companies. Many vocational teachers also have extensive contacts with local employers in their field. Make use of these contacts as you find potential placements, and use vocational teachers' recommendations as assurance that student employees will be competent.

Help each student find a job suited to his or her ability and interests

A major portion of your job each spring and summer will be helping students find jobs. Whether your clients are exclusively students with handicaps or include all types of students, you will be expected to connect students with jobs and, to the extent possible, to persuade employers to take a chance on a new graduate. The placement process should include some vocational assessment to determine the range of appropriate jobs. It might also include instruction in how to locate jobs, fill out job applications, and do well in job interviews.

Provide or locate employability skills training for students

The amount of employability skills training you should do will depend upon your other responsibilities and the availability of appropriate local programs. Many students with handicaps lack job keeping skills, and will need coaching. You should be prepared to do that coaching or find someone else who can do it. If you lack the time for this effort, you should consider asking the special education classroom teacher to develop units on employability skills and ask the vocational education teacher to emphasize these in the classroom.

Get to know the students you must place as early as possible

To the extent possible, learn about your special students and get to know them. The better you understand them, the better you will be able to judge whether a particular placement will work and to prepare the prospective employer. The earlier you know what kinds of students you need to place, the more lead time you have in finding positions for them. A good time to become acquainted with students is during their work experience. Observing them on the job will help you place them and tell you what you must emphasize in preparing them for employment. Knowing the students well will also help you to counsel them during their first weeks of employment.

Monitor your student placements very actively

Visit your students frequently and call their employers regularly. It is best to visit students during their first day on the job, at the end of each week during the first month, and monthly during the following year. Calls to employers should be fairly frequent. The extent of monitoring you do should vary depending upon each student's needs and their employer's desire for supervision. Tell both employer and student to call you whenever they feel the need. Assume that in many cases you will have to help the employer and the student adjust to the new situation, so be prepared to do this kind of job coaching. Persuade both the employer and the student to call you before problems develop. Ask both for feedback about the placement, so you can improve your ability to match students to jobs and to help students adjust to jobs.

WHAT PRINCIPALS AND DISTRICT ADMINISTRATORS CAN DO 6

As a principal, director of vocational education, or superintendant, you must play an active role in securing quality vocational education for learning handicapped students. You may prefer delegating authority over programs and support services to department chairs or teachers, but in this case you will have to be more actively involved. Your leadership and personal, active involvement are critical. Improving the employability of handicapped students requires a level of administrative support far above that required for the achievement of most educational goals, partly because one prerequisite for success is interdepartmental cooperation between special and vocational educators. This section explains what local administrators can do to improve vocational education for handicapped students in their school or district. Since there is some overlap between the responsibilities of school administrators and district administrators, suggestions for both levels are included here. The suggestions are organized into separate sections for actions concerning priorities, staffing, staff coordination, and community relations.

ESTABLISHING CLEAR PRIORITIES

Make it clear that serving handicapped students is a priority for you

Serving handicapped students in vocational education is often neglected simply because it is not a top priority for anyone in the school. You will not succeed in improving that level of service unless you make it one of your major priorities. Furthermore, you must communicate your concern to the teachers in your school or district. One way of doing this is to hire special staff as described in the last chapter, but do not be tempted to delegate your concern entirely to another staff member.

Centralize responsibility for each student's program in a single staff member

All too often, handicapped students "fall through the cracks" once they get out of the self-contained classroom. When a student is receiving a variety of services, it is essential that a single staff member be assigned overall responsibility for the student. For some students the special education teacher may be the most appropriate person and for others the vocational special needs coordinator. Regardless, the student, parents, and the student's teachers should be informed of the choice.

Devote more resources to serving mainstreamed students

Evaluate the level of special assistance you are providing to students in mainstream vocational programs. Is it sufficient? In most schools today, the answer is a definite "No." Remember that, although the mainstreamed students may have greater academic ability than do the students in

much larger than their special education classes. Remember, too, that vocational educators are not always trained to teach students with disabilities. Are special educators in your school providing assistance to the mainstreamed handicapped student? Do they help the mainstream teachers? What more needs to be done? The guidelines in this booklet provide some options for improved assistance to the handicapped student in vocational education, but you should also consult the vocational education and special education teachers for their ideas on how you can help.

Arrange for adequate support services outside vocational classes

It is important to have special assistance in the vocational classroom for students with handicaps, but an adequate support program outside the classroom is also needed for these students to succeed. You should see that there are sufficient resource staff to assist both vocational teachers and the students themselves. As a school administrator, you can organize support services within a learning resource center, the special education academic program, or the special education resource room. Among those support services which are necessary are remedial skills development, counseling, vocational assessment, and placement assistance.

Support staff must be funded out of special education funds or as part of the vocational education program for students with handicaps. These positions can be funded out of the federal VEA handicapped setaside or matching funds, since the jobs are created specifically to serve handicapped students. Consult your state's special needs consultant in your state's vocational education department or state vocational board about how to obtain these funds.

It is tempting to rely upon classroom teachers to perform these functions, but these jobs cannot be done by teachers in their spare time. Each support service is as necessary as classroom instruction to improving the employability of students with handicaps. Each should be provided by a qualified professional hired for that purpose.

Locate some support services near the vocational classrooms

The resource staff should work near the vocational classrooms to faciitate contact with students and teachers. If you have a special "learning resource teacher," that person can work in or near the classroom to provide the actual support service for students in a particular set of programs. If special education teachers provide most of the services, you can assign a "coordinator" near the vocational class to provide a way for vocational teachers and special education teachers to communicate about particular students.

Make financial resources available for special projects

It is clear that we cannot improve vocational options for handicapped students without spending more money than most districts now have allocated for this purpose. Often, teachers have ideas for improving their programs which require extra funding, at least in the short run. If there is no

money available to put these ideas into practice then very few will be tried. Students will suffer, and well-meaning professionals will become more discouraged about the prospects for program development. There is no avoiding the conclusion that we need to find funding for special projects, as well as for the additional staff mentioned above. Teachers can do little more than make their current efforts without a greater financial commitment from their school districts.

Federal vocational education and special education dollars are available and should be sought for these activities and services. You should consult with the state departments of vocational and special education about these funds, or with other administrators in your distirct who are familiar with these programs.

One investment which can pay off very well for special needs students is for school districts to give teachers grant money to rewrite curriculum and develop new materials. While mini-grants cannot compete with the salary available from a second job, they do increase the probability that a motivated teacher will choose to spend time on course development rather than in other pursuits. Their symbolic value as a reward for excellence may well be quite motivating. As a condition of receiving the mini-grants, teachers should be required to share their accomplishments with their colleagues, thus multiplying the effect of their efforts

EXAMPLE

ITEMS ELIGIBLE FOR FEDERAL VEA FUNDING

The following services may be supported through federal setaside funds for handicapped students:

Vocational Special Needs Coordinators
Tutors/Notetakers/Interpreters
Vocational Assessment
Teacher Aides/Paraprofessionals
Special Instructional Materials
Separate Vocational Class
Supplemental Placement Service

This list is not exhaustive, but suggests the diversity of services which can be supported through a school district's regular share of the handicapped setaside. In addition, other services or programs may be used as local matching funds (basic skills classes in many states), or may be eligible for special grant money from state or federal sources.

Encourage experimentation

Sometimes you may have to advocate unusual programs for vocational special education. Federal money may be available to fund these efforts, and you can help in obtaining these funds. Small schools and small districts may not be able to support extensive experimentation, but if teachers have an unusual idea that seems sound then try to give it your full

support. Some school districts are experimenting with all-day programs of work and instruction for students who are in danger of dropping out of school or as a way of attracting dropouts back to school. While these programs are not based on classroom instruction, they may be the most effective strategy for some students.

EXAMPLE **AN ALTERNATIVE VOCATIONAL EDUCATION PROGRAM**

A special transitional program of work experience has been tried in New York City in recent years. The "FLEX" program serves handicapped students ages eighteen to twenty-one who have not graduated from high school. FLEX takes these older students out of the school setting and places them at a job site for a twenty-week program of work experience and instruction. The amount of academic instruction varies with the job; it is job-related and takes place at the job site. The FLEX program has served about 700 clients, 600 of whom have found permanent jobs or continued their training. This program has succeeded with a group of students for whom the regular public schools have already failed, and can serve as a model for programs of last resort. FLEX has been so successful that it has become a permanent part of the New York City school system as an alternative high school with many sites.

STAFFING

Hire extra staff to provide placement and follow-up services

The most important transition service of all is job placement, and each school district should have a job developer to place and follow up on its graduates. If your district is fairly large, there can be a full-time developer for handicapped students only. If the district is too small for this, you may wish to make that part of a staff job.

Do be sure you give the placement responsibility to someone who has adequate time for it. Some vocational schools require that teachers place all of their graduating seniors, but this does not work well when teachers have to do this job "in their spare time." Although some teachers will take on this responsibility gladly and do an excellent job of placing their handicapped students, most will not. One solution would be to give vocational teachers the option of contracting to perform this service for additional pay. Otherwise the responsibility should rest with another school district employee whose work load can reasonably include this task. Whether teachers or special staff place students, their performance should be evaluated annually, including their success with handicapped students.

EXAMPLE

PLACEMENT AND FOLLOW-UP IN CALIFORNIA

California's "Project Work Ability" is a statewide program which was begun in 1982 to meet the need of vocational training for learning disabled high school students. Work Ability coordinators not only help students find jobs, but provide other transition services as well. Project Work Ability coordinators give their students a vocational assessment to assist in placement, help them decide upon an appropriate vocational education program, teach basic job finding skills, counsel students during their critical first weeks on the job, and try to find other jobs for those whose placements do not work out. Project Work Ability is funded through vocational education funds, special education funds, and grants from the State of California and JTPA (Job Training Partnership Act).

Take a flexible, market-oriented approach to in-class staffing

Many vocational classes need extra staff to provide special help, but it is not always clear what kind of extra help to hire. Aides are very cost effective if a teacher's aide salary attracts a capable paraprofessional in your community. If aide salaries are insufficient to attract qualified staff, it is more cost effective to use advanced students as tutors. (See Chapter 2 on using student tutors.) Consult your vocational education staff about the quality of their aides to decide what hiring practices are best.

Where good aides are hard to find, some consideration should be given to coordinating with any local colleges to attract students who would like to work as teacher's aides. The best available pool of assistants must be identified in your particular community and attracted by whatever inducements are available: high school credits for advanced vocational students, college credits in education for college students, and adequate salary for qualified adults.

ACHIEVING STAFF COORDINATION

Provide paid time for coordination between vocational and special educators

We cannot emphasize the importance of coordination between vocational and special educators too strongly. Vocational education teachers need to draw on the expertise of the special educator to cope with various students, and special education teachers need to know what they can do to assist students with their vocational program. It is not realistic to expect individual teachers to communicate at the level required without release time, and it may be more cost effective to create a staff position in special needs coordination for each one hundred or so handicapped students who are enrolled in vocational education. The precise solution will depend upon the size and organization of the vocational programs in your school district, but the principal is clear: coordination will not be sufficient unless time is budgeted for that purpose.

Bring about cooperation between special and vocational educators

If you do not designate a staff position as solely responsible for providing or coordinating student support, then you will have to spend a great deal of your own time monitoring how well the support services are being coordinated with the vocational instruction.

If special education teachers must provide support services, then special care must be taken to set up the flow of communications. The special education teacher and the vocational education teacher must communicate between classes or in writing about the services which are needed. The communication problem is worse when the vocational classes for handicapped students are at a different campus (e.g., an area vocational technical center) than the academic classes. In this case there must be a major time commitment to interschool communications. There is less of a problem at comprehensive schools, since special education teachers and vocational teachers are located in the same school and are part of the same faculty. Support services can be greatly improved if the special education teachers receive assignment sheets for each student from the vocational teachers or if vocational teachers are asked to fill out check-up sheets for the special education teachers on a regular basis.

Set up interschool department meetings for each vocational area

Vocational education teachers often do not know how to make their course materials more accessible or make other modifications which could help students with learning handicaps. Bringing teachers in the same vocational field together to discuss program changes and share materials would help achieve this goal and improve instruction generally . Often when one teacher has ideas, materials, or plans that can profitably be used by others in the field, their expertise benefits only one school because there is no mechanism for sharing. Interschool department meetings provide a way for vocational teachers to pool their knowledge and allocate responsibility for future efforts.

Encourage cooperation between feeder and vocational schools

Programs offered at vocational centers are rarely coordinated with the vocational courses at feeder schools—even more rarely with special education courses at feeder schools. As a district administrator, you can find ways to improve these linkages: joint staff meetings and in-service training are two possibilities. It is worth developing a way for personnel at both types of schools to communicate on a regular basis when they share responsibility for the same students. Release time for special educators to visit vocational schools is one very effective strategy for improving coordination between special education programs and vocational centers.

MAINTAINING COMMUNITY RELATIONS

Maintain frequent communication with potential employers

Administrators should develop good employer contacts and "sell" them on the vocational program, especially on the effort to educate students with handicaps. Employers can also be asked for input on the basic skills needed in entry-level employment. Students who have only partially completed the vocational curriculum will then learn the skills they need to become employable at some level. Ask your vocational special needs personnel to develop a "tips" list for employers with suggestions for supervising handicapped youth. This list could specify tips for all students, for students with specific disabilities, or even for particular students in a work study program. Tell employers about the Job Accommodators' Network (JAN) and its toll free number (800) 526-7234. This is an information system for employers to exchange ideas about accommodating disabled workers.

CONCLUSION 7

We have tried to limit each chapter of this guide to actions that educators can take within their current scope of authority. Vocational education teachers can learn to be patient with handicapped students while maintaining their high standards. They can modify their courses in a variety of ways and seek help from other professionals. Vocational education administrators at the school and district level can use their authority to structure the curriculum and classroom assignments in ways that help teachers serve handicapped students. They can request teacher aides or team teaching arrangements as needed. Special education teachers can prepare their students for vocational education, coordinate all services received by handicapped students and work with vocational education teachers. Professional support staff can perform their specific roles as coordinators, instructors, or job developers, but can also find ways to assist vocational education teachers. Finally, administrators at all levels can demonstrate their commitment through staffing, finances, and leadership. When all of these actions are taken, the resulting program will approach the ideal structure described in the first chapter. Yet any one of these actions, taken alone by one committed professional, can significantly increase vocational options for students with handicaps.

The steps recommended in this guide can all be taken now, without any new actions by state or federal government. Certainly there is a need for policy changes at that level, but in this guide we chose to concentrate on actions we can take now. As part of the project leading to this guide, we also produced an extensive report, "Improving the Options of Handicapped Students in Mainstream Vocational Education." That report, available from the Office of Special Education and Rehabilitation Services, explains the findings of our research in greater detail and also specifies the state and federal policy implications of those findings.

For federal officials, our recommendations emphasize changes in funding and data collection. Our policy recommendations for state departments of education include specific types of funding, technical assistance, and evaluation that will improve services to handicapped students in vocational education programs. For example, state departments of education can require that local education agencies address the quality of both classes and services for handicapped students in vocational education. State education departments should also encourage better coordination between vocational and special educators. In addition, state funding should be adequate to make good programs possible and should provide total support for functions that are more efficiently provided at the state level.

Knowing how state and federal policy could be changed may give local educators some direction for their lobbying efforts, but this is the long term solution. In the meantime, there are certainly steps which each of us can take to expand the options of students with handicaps in vocational education. We certainly hope that this guide encourages educators to take those steps.

APPENDIX: PROGRAMS VISITED FOR THIS PROJECT

Mainstream Programs:

Mission Trails ROP/C	Food Service	Salinas, California
Miami Jackson High School	Commercial Foods	Miami, Florida
Coastline ROP/C	Food Service	Costa Mesa, California
Lake Mills High School	Home Economics/Foods	Lake Mills, Wisconsin
Beloit High School	Food Service	Beloit, Wisconsin
Moore Norman Vo-Tech	Child Care	Norman, Oklahoma
Sauk Area Career Center	Child Care	Crestview, Illinois
Robert Morgan Voc. Tech. Institute	Small Appliance Repair	Miami, Florida
Miami Jackson High School	Small Appliance Repair	Miami, Florida
Moore Norman Vo-Tech	Auto Body	Norman, Oklahoma
Decatur Area Vocational Center	Auto Body	Decatur, Illinois
Eisenhower High School	Small Engine Repair	Decatur, Illinois
Indian Valley Area Voc. Center	Auto Mechanics	Sandwich, Illinois
Coastline ROP/C	Proof Operator	Costa Mesa, California
Fountain Valley High School	Graphic Arts	Huntington Beach, California
San Mateo Union High School	Construction Carpentry	San Mateo, California
Locklin Vo-Tech Center	Plumbing	Milton, Florida
Sauk Area Career Center	Nursing Assistant	Crestview, Illinois
East Alton-Wood River High School	Machine Shop	Wood River, Illinois
Curie High School	Woodworking	Chicago, Illinois
Edgerton High School	Technology	Edgerton, Wisconsin

Separate or Modified Programs:

Miami Jackson High School	Commercial Foods	Miami, Florida
FLEX	Food Service	New York, New York
N.Y. School of Fashion Industries	Retail	New York, New York
Clara Barton High School	Dental Assistant	New York, New York
Putnum-North Westchester BOCES	Health Assistant	Yorktown Heights, New York
Miami Jackson High School	Small Appliance Repair	Miami, Florida
O.T. Autry Vo-Tech	Institutional & Home Services	Enid, Oklahoma
Francis Tuttle Vo-Tech	Building & Grounds Maintenance	Oklahoma City, Oklahoma
Francis Tuttle Vo-Tech	Commercial & Home Services	Oklahoma City, Oklahoma